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ABSTRACT

This paper describes an information system for managerial decision making which attempts to satisfy the data requirements of all 12 mental health comprehensive services. The essential characteristics of an on-line computer information system are presented with the emphasis upon the use of the system by directors and managers for program planning, management, and decision making. A distinguishing characteristic of this management information system is its simplistic, yet elaborate nature. This apparently contradictory phrase illustrates the strength and flexibility of the system. It is simple in design, in data requirements, and in the number of forms used. On the other hand, it is elaborate in terms of the quantity and quality of information produced for use by program directors and individual staff persons. Following an overview of the system, the major sources of input into the system are described along with a simplified introduction to the organization of the data base. Output, in the form of reports generated by the system, is also discussed. Finally, the application and use of the information system on a day-to-day basis by center directors and program managers is examined. (Author)

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A MENTAL HEALTH INFORMATION SYSTEM AND ITS USE IN PLANNING, DECISION MAKING, AND MANAGEMENT

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Abstract

An information system for managerial decision making is described which attempts to satisfy the data requirements of all twelve mental health comprehensive services. The essential characteristics of an on-line computer information system are presented with the emphasis upon the use of the system by directors and managers for program planning, management, and decision making.

A distinguishing characteristic of this information system is its "simplistic, yet elaborate" nature. This apparently contradictory phrase illustrates the strength and flexibility of the system. It is simple in design, in data requirements, and in the number of forms used. On the other hand, it is elaborate in terms of the quantity and quality of information produced for use by program directors and individual staff persons. The guiding principle has been to ask as little of the professional staff as possible and to simultaneously demand that computer technology handle the complex interrelationships among various components of the system.

Following an overview of the system, the major sources of input into the system are described along with several other sources of readily available information which are in various stages of development. A simplified introduction to the organization of the database is given illustrating its design, storage, and retrieval capabilities. Output, in the form of reports generated by the system, is discussed and organized according to five major areas: patient information summaries, reports which monitor a patient's status and progress, program management reports, mental health service area reports, and federal and state government reports.

Finally, the application and use of the information system on a day-to-day basis by center directors and program managers is examined. On-going planning, management, and decision making have and should continue to rely heavily on reports produced by the system. Several specific examples are presented using primarily the client application statistical report, the active case load report, and the professional staff activities report. The examples include both in-house programmatic applications and accountability to external funding sources. Throughout the paper, the importance of a completed feedback loop is emphasized. Feedback provides the information required for sound decisions, regular monitoring, and effective evaluation. Without adequate feedback, the entire information system is destined to be a failure.

A Mental Health Information System and Its Use In Planning, Decision Making, and Management

According to Lasser (1975), we are slowly departing from the age of Aquarius and rapidly proceeding into the age of Evaluation. All agencies and human service personnel are being held accountable for their daily activities and the effectiveness of all delivery programs. It is a matter of survival; without proper justification, financial resources will be withdrawn and agency priorities will be changed and/or entire programs eliminated. Hence, the key words in our English vocabulary have become accountability and evaluation. One of the fundamental elements of any effective evaluation system is information. This is not information in in the ordinary usage of the term, but information denoting highly objective, experimentally-based data upon which sound decisions can be formulated. Therefore, whenever one speaks of evaluation, the reference is to the processes of information acquisition, justification, and utilization. This is applicable to all areas of mental health: program, financial, personnel, and administration.

As noted in Pollack et. al.'s (1974) article, information systems began with inpatient facilities around 1951. Since that time there has been a tremendous shift of client population from mental hospitals to community mental health centers. With this change has come a reassessment of information systems. In Monroe County, New York, one of the first attempts at monitoring patient movement was instituted in 1961. Soon thereafter other regions of the country began such programs. At the beginning much of the information was treated manually with calculators and tabular check-lists. As the community population grew and as more demands were placed on mental health centers, the statistics needed for program monitoring and management become more complex. Eventually, the manpower problem became overwhelming and computer technology was introduced into the area of mental health. With it, of course, came high costs, complex technology, and specialized personnel (Pollack, Windle, and Wurster, 1974).

Feldman (1972) has noted in a recent discussion that "mental health professionals now speak freely (but too often unwisely) about '360-40's,' 'optical scanning,' and magnetic disks'" (p.5). Administrators and program directors are thirsty for data, supervisors often crave the most recent information, and funding agencies will ignore anyone petitioning for money unless graphs, tables, and charts clearly delineate needs and methods to alleviate these needs. The purpose of a computerized data-processing system is three-fold (Crawford, 1974). First computers can handle the routine processing of information more quickly and more efficiently than clerical staff; second, speed capabilities permit administrators to obtain monthly, weekly, and even daily reports; and thirdly, the tremendous capability for information storage aids program, staff, and patient monitoring. Unfortunately, as Levinson and Klerman (1972) conclude, most current health delivery systems are "inefficient, inequitable, and frequently destructive" (p.64). One method for changing this predicament is to upgrade management capabilities. This involves a commitment to an information system upon which all planning, decision making, and evaluation of delivery services would be based. One of the most effective tools available in this endeavor is the computer.

However, this new technology has not reached perfection. Many issues never raised before now become pressing problems. Confidentiality must be maintained (Morgan & Crawford, 1974), funds must be available, and staff and administrative support become vital to any information system. In fact, the key to any and all evaluation efforts resides in the staff reporting the original data. Supplying data will become more popular if the evaluation team is able to inform all suppliers (clients, staff, and supervisors) of tne outcome of the various evaluation assessments. The feedback loop must be completed thoroughly and with great regularity. Staff quickly become impatient and discouraged if they feel their efforts are being wasted. This is particularly true during the development and early implementation phases of an evaluation program when one of the most serious problems encountered by the evaluation team is its inability to inform other staff persons of the outcome of its data collection efforts. Too frequently, novices expect computers to generate data, magically supply needed statistics, and store information into some deep, dark cavaran never to be seen again. Therefore, when computerized information systems are discussed, one must consider the type of feedback, as well as the time needed to complete the feedback loop. It is feedback that provides the information for decisions, monitoring, and evaluation. Without it, the entire system is a failure.

The purpose of this paper is to discuss an information processing system that challenges and hopefully solves the problems of information acquisition, the computerized storage of these data, and the completion of the feedback loop. Specifically, the authors will (1) describe some essential characteristics of an on-line computer information system, (2) demonstrate that the feedback loop can be effectively completed with high dividends on an initial investment, and (3) relate how center and program directors make use of this system for program planning, management, and decision making.

Characteristics of a Computer Information System

Overview of System

At the onset of our evaluation program our major objective was to build a simple, yet elaborate information system which would both satisfy the requirements of all twelve mental health comprehensive services and result in a relatively high degree of staff satisfaction. The statement "simple, yet elaborate" appears to be contradictory. It is not.

Our information system is "simple" in its design, simple in terms of data gathered from patients and staff, and simple in terms of a limited number of forms used. An attempt has been made to satisfy the data demands from all center services by using the same basic input format throughout all center programs. This has resulted in a highly standardized system and one that has avoided the proliferation of forms from one service area to another. While this has not been an easily attained objective, it has been achieved. In all respects our information system is "simple," particularly when compared to many other similar systems.

The information system is "elabcrate" in terms of its output or dividends, i.e., there is a considerable quantity and quality of information generated from the simple input format. These high outcomes have been accomplished by concentrating on computer programming technology. A major emphasis has been placed on computer generated output (e.g., relationships among variables, calculation of measures, etc.) rather than on manual computations performed by individual staff persons. The policy has been to ask as little of the staff person as possible and to simultaneously demand that the computer programming handle the intricate and complex interrelationships among the numerous input variables. As a result, the outward design of the system appears to be rather simple. However, the computer schema and information-flow processes are quite complex and elaborate. In our opinion, this is the most effective way to construct an information system while simultaneously ensuring a relatively high degree of staff satisfaction.

The development of our management information system has been an evolutionary process. At the present time we are in the third and final stage. The first evaluative efforts were performed manually by clerical workers with the aid of calculators. The increasing demand for and quantity of data coupled with rapidly expanding services quickly submerged the manual methods. The second stage introduced the first computer technology into the evaluative efforts. New forms and procedures were introduced, information was coded onto keypunch forms, and the coded cards were fed in a "batch" fashion into the computer. Data was stored on magnetic tape and regular reports were generated for program directors. Due to ever increasing demands for information from local, state and federal sources, the voluminous increase in data from all service areas, and the greater complexity of management and decision making, a third stage in the evaluation effort was instituted. This final stage employs an on-line interactive computer system which greatly expedites the input and processing of information from all sources. With this additional speed and interactive capability, the ability of center directors and managers to plan and manage their programs has been greatly enhanced. Information is more readily available and the treatment and program decisions made are hopefully based on an even more efficient information base.

The major components of our management information system may be considered very conventional. As seen in Table 1, the input into the system comes from

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Insert Table 1 about here
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patient demographic data, staff transactions with patients, and other staff and program activities. This information is organized and stored in a database according to its origin. Finally, the output from the system is organized into five major categories and disseminated to staff through numerous reports. These reports originated from program needs and were developed in consultation with center personnel. They are produced monthly or upon request of the various service and program directors.

Input Into System

At the present time there are two major sources of input into the information system. These are shown in the solid-line boxes in Table 1. The first is information supplied by the patient while being admitted to the mental health center. Basic demographic information is obtained from all clients, children and adults. Included in this basic information are such items as the referral source, presenting problems, physical and mental health problems, previous psychiatric care, psychological testing, and professional services rendered to other family members. Additional information is also obtained depending on the age of the client. For example, parents and adults are asked to supply information pertaining to their current marriage, their educational and occupational status, the various benefits which they receive, and other social agencies which are currently serving them. Supplementary information for children focuses more on the conditions in the home, the marital status of the natural and present parents, school history and related problems, and involvement in community clubs, groups, etc. Staffing information is also provided on all patients. Included among these variables are the service assignment of the applicant, the treatment assignment (individual, group, etc.), admitting diagnosis, fee schedule, and staff person responsible for client.

The second major source of input into the information system is rather unique. A single form, the Daily Activity Report (DAR), replaces the myriad of forms usually found in a mental health center (e.g., internal transfers, external referrals, and termination of patients). A staff person merely checks the relevant information on a DAR following each major activity of the day (e.g., patient contacts, dictation, treatment or program planning conferences, consultation services, travel, administrative duties, etc.). The DAR's are prepared in tablet form using both sides of a single sheet. Staff reporting varies, of course, depending on each person's activities of the day, but the average full-time staff member checks-off approximately 7-9 DAR's each day.

The DAR is the key element in the simplicity of the information system. It fulfills all the conditions mentioned earlier which are required of a "simple" system: simple in design, simple in terms of data gathered about patients and staff, and simple in terms of a limited number of forms. In spite of increasingly complex demands upon the information system, it has been possible to maintain the simplicity of the system and a single daily report form. Mental health services as diverse as partial hospitalization, crisis intervention, outpatient treatment, consultation and education, and program management have all been incorporated into the same, basic reporting form. This has been made possible largely through various coding procedures and through the use of computer programming to organize, store, and integrate data in a reliable manner.

Each DAR contains a substantial amount of relevant data. For example, the primary and secondary recipients of the staff person's services are given together with the amount of time spent, the location of the activity, the

disposition at the conclusion of the contact, and the perceived effectiveness of that particular session. The program component rendering the service is also indicated along with the specific activity provided. These activities are organized into five major areas: direct services, admission and emergency, treatment support, consultation and education, and administration. If appropriate, patients may also be terminated, referred or transferred, or have diagnoses entered or changed. Overall, the DAR is quite a versatile instrument.

The DAR recently underwent its fourth revision. Due to increased demands from clients and requests from various staff persons, several new items of information were incorporated into the newest DAR revision. Provisions have been made for an entire therapy group to be reported on a single DAR. In addition, the attendance of patients at therapy sessions is now recorded as is the therapist's completion of progress notes on that session. Whether the patient contact was scheduled or unscheduled is also indicated and the patient's perceived progress toward therapy goals is noted at the time of termination. Finally, new information regarding prescribed medications and drug and alcohol treatment is included. While this new information increases the length and complexity of the DAR form, it has still been possible to capture these diverse elements on a single form and, thus, successfully avoid the creation of new forms for the staff persons to complete. In spite of mounting information demands, the basic reporting system remains relatively simple.

In addition to the patient identification data and the DAR as major sources of input into the information system, there are other viable sources which deserve serious consideration. Five of these possible sources of new information are indicated in Table 1 by dashed-line boxes. Several of these sources are in the development and/or testing stages.

While the patient's completed application contains much factual data, it does not capture the verbal and non-verbal dynamics of the intake process. Much of this data could be contained in a computerized data file. For example, problem areas as perceived by the intake worker could be recorded including the worker's assessment of the patient's body language, mood, and cooperation during the interview. Data from the diagnostic process might also be entered into the system. Such data could summarize evaluations performed in the medical, psychiatric, psychological, social, and educational areas. Moreover, since the director and staff persons desire feedback on the effectiveness of treatment, data obtained from goal-setting procedures and the proposed treatment-plan could be included in the database.

At the time of admission, patients are sometimes requested to supply detailed information concerning their medical history--major illnesses, periods of hospitalization, diagnostic and surgical procedures, treatment plans, etc. A summary of this data could be maintained in the information system particularly if the medical personnel wish to have an overview of the patient population or desire to monitor the progress of patients in various treatment modalities. Somewhat related to the above, is the need of most mental health centers to maintain a constant surveillance on their drug inventory. This need is being intensified by anticipated professional review

standards and accreditation procedures. At a minimum, information will need to be maintained on patient medications and on drugs stored within the facility.

The child's application supplies many important facts but does not contain very much developmental history -- early childhood illnesses, important maturational dates, separations from parents, etc. It would be particularly beneficial to the child and adolescent program director to know the frequency with which such variables are found within his/her client population. Not only would this assist in the formulation of treatment plans for specific groups of children, but it would be invaluable in the program planning and management of all children's services.

A final source of new information indicated in Table 1 is the data contained in the ledger most centers maintain near the entry point to the facility. This ledger typically records each patient's visit, the therapist seen or group attended, the next scheduled appointment, and various financial information, e.g., the fee charged for the visit, amount paid on account, third-party payors, and balance remaining in patient's account. This ledger, then, contains information which can be used as an independent validity check on the frequency of patient contacts and the adequacy of DAR reporting by center staff persons. The ledger also provides the necessary financial information for cost accounting studies, the implementation of computer billing procedures, and other financial summaries.

In summary, the present information system derives its input from two major sources: the patients' identification data and Daily Activity Reports submitted by center staff persons. In addition, there are several other sources of readily available information which are in various stages of development. All of this data is entered into CRT terminals and transmitted via a direct telephone line from the two centers to the computer center at Clemson University. At the University the information is stored, processed, and analyzed by an IBM 370/165 computer.

Database of System

Lindberg (1974) states that one major problem with most database systems is their irritating inflexibility once the programming sequence has been completed. Likewise, many mental health practitioners feel that computer systems must be so unreasonably complex that no one can comprehend them. The fundamental rationale behind our database conforms to the basic philosophy of our entire system; that is, the design is "simple but elaborate". What this means is that conceptually the organization is easily understandable, that the flexibility it affords is one of its major strengths, but that the actual task of programming and coding the system is very elaborate and extremely intricate.

Specifically, the database for our information system is organized into three storage components as shown in Table 1. The first component deals solely with information about each of the center clients; the second one includes all relevant information concerning center staff, and the

third storage bank concentrates on center (or in-house) activities and all data related to outside agencies. The overall organization of the database is comparable to the way in which one would develop a manual filing system. For example, at the beginning of each patient section, we have the basic identifying information for that client. This data includes the general application form mentioned earlier and any supplementary information applicable to a particular type of client. Subsequent to this material, the staffing information on each patient is stored which includes primary and secondary diagnoses, staff person responsible, and other treatment monitoring information. All the DAR's which have this patient's name as the primary recipient follow in our storage component. The entire system is comparable to the type of activity a clerical person would perform if he/she were manually placing all this information in a patient file drawer.

Analyzing in more depth the staff storage component, we conceptually repeat the same system as above. Each staff person has his/her own file drawer. At the beginning of that file is a short staff identification record which contains the person's name, ID number, address, telephone number, and professional classification. This is followed by all the DAR's which give that staff person's name as the primary recipient (e.g. DAR's on inservice training sessions).

The third component on center activities and outside agencies works on the same principle. Initially, we have a very brief identification form on each center activity (ID number, service component, etc.) and on each outside agency (name of organization, address, telephone number, and other identifying data). As before, all the daily activity reports which have that agency as primary recipient are filed in the appropriate filing drawer.

The method by which information is retrieved from the system is to direct the computer to proceed to the appropriate filing location and select relevant data from the desired storage component. Looking at the procedure in a rather cumbersome manner, we would have a separate file drawer for each patient, staff member, agency, and center activity. When we desired a specific piece of information, we would proceed to a specific drawer and extract the appropriate DAR or application form and copy the information on another sheet of paper. The computer employs the same method, only performing the operations more quickly and more efficiently. Obviously, if one wishes to be able to retrieve all material applicable to a specific problem, some type of cross referencing system is needed. Our technique is similar to the one which most libraries utilize. A series of 3 X 5 cards are stored which indicate where the various sources of information would be. For instance, if a program manager were concerned about a particular staff member and the fact that he/she has been working with a specific client, the computer would be able to access the needed information by proceeding either to the staff storage component or the patient storage component. In either case, our cross-referencing system would indicate that data in two drawers is related in this situation and that both must be searched in order to obtain all relevant data. This data is then printed on one of our statistical reports or on a CRT terminal if immediate access is needed.

The database also uses a rather sophisticated pointer system to connect the three storage components. In other words, a staff person's file can easily be attached to the file of the client for whom he/she is responsible, to the files of all center activities performed on behalf of this client, and to the files of all outside agencies contacted. This means that we can acquire the same information by focusing on the staff person's name, the agency involved in the transaction, or the patient's name. This multi-method of accessibility permits us to have more flexibility in reporting and significantly reduces production costs.

In order to eliminate possible duplication on our system, all information is stored and retrieved by number. Center clients are assigned an identiification number as are all staff members, center activities, and outside agencies. When the system is directed to store new information or retrieve needed data, the computer focuses on the identifying number and disregards any alphabetical information. This method aids in the design of the storage components and allows the entire system to function on one type of indexing system.

In summary, the purpose of this section has been to depict the organization of the database through the use of a file-cabinet analogy. Obviously, this simplistic approach does not totally describe the complex and intricate design of the database lay-out, our retrieval capabilities, and the inter-component linkages. However, we wanted to demonstrate through a rather non-technical discussion that the database system does satisfy our overall goal of a simple but elaborate information system.

Output from System

As indicated previously, the information system is "elaborate" in terms of its output. There is a considerable quantity and quality of information generated from the simple input format. The bottom portion of Table 1 illustrates the diversity of output. As can be seen, reports generated by the information system have been organized into five major areas. Because of space limitations, it is not possible to provide a complete description of each area and of each report. Rather, an example or two from each of the three crucial areas will be considered in this discussion.[1]

The two areas which will not be dealt with in this paper are (a) federal and state government reports, and (b) service area reports. Reports from both of these areas should be relatively self-explanatory. Obviously, mental health centers must report patient data and program activities to federal and state funding sources. The various service units within the center also require regular feedback on their program operations. Service area directors and coordinators must monitor program activities and evaluate them against their stated goals and objectives. Therefore, a variety of statistical and patient information is summarized for these staff persons.

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[1]More detailed information on each report (e.g., its layout, specification of variables, typical output, etc.) is available from the authors upon request.

Patient Information Reports are fundamental for monitoring the entire center patient case load, both past and present, and for assessing program impact upon the mental health of center clients. For example, the Alphabetical and Numerical Listings of Active and Terminated Patients permit one to quickly identify any former or current patient and to determine that person's present status. From these reports one can ascertain when the patient was admitted to center services, the therapist responsible for the person, the date of the last DAR indicating some activity on behalf of the individual, the total number of DAR's submitted on that person, and various demographic and financial data. These reports have been essential not only because they permit quick patient identification but because they also allow the evaluation team to maintain an accurate and up-to-date patient file for the on-line information system.

All of us in mental health are concerned about the impact or lack of impact our services are having upon the mental health of our clients. As one attempts to assess this impact, a statistical analysis of terminated clients is performed using three relevant criteria: (a) diagnostic classification, (b) source of referral, and (c) final disposition. Table 2 summarizes

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Insert Table 2 about here

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some of the variables used in this analysis for one portion of the report, that of final disposition. Knowing that a client successfully completed treatment, withdrew himself from treatment, or left the center as a referral to a local/state hospital, are there any factors we can discern about that patient or his treatment program? The Analysis of Terminated Patients Report, then, reviews the manner in which a person left the care of the center in relationship to such variables as length of treatment, type of service received, amount of time required to initiate treatment, previous mental health care, problems presented during admission, terminating diagnosis, number of internal transfers among therapists, number of previous admissions, fee paid for treatment, and so on. In other words, the analysis attempts to illuminate which variables, if any, are related to successful versus unsuccessful completion of treatment.

The other two portions of the report are similar to that of final disposition except that they focus on diagnoses and sources of referral. Again, various patient and treatment variables are reviewed in light of the patient's original source of referral to treatment and his/her primary terminating diagnostic assessment. All of these analyses are performed using data which is available in the information system. Taken together with other outcome indicies (e.g., consumer satisfaction, goal attainment, and ratings provided by significant others), a solid foundation has been built for the effective evaluation of treatment and program impact upon the mental health consumer.

A second major output area is concerned with Reports which Monitor a Patient's Status and Progress. The reports in this area are all designed to

monitor the current status and progress of patients in treatment. In comprehensive centers with large patient case loads, it is possible for persons to drop out of treatment without being contacted or to "fall through the cracks" practically unnoticed. An essential part of the evaluation effort is to *provide feedback to the clinical staff regarding these problems. Systematic* feedback is also necessary for appropriate program planning, implementation, and revision.

A traditional report in this area is the Active Case Load shown in Table 3. Therapists receive a computerized report each month on patients

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Insert Table 3 about here

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they are responsible for and may retrieve their current case load at any time via the on-line CRT terminals. As can be seen in Table 3, the report contains regular identification information which can be used to contact the patient if necessary (e.g., ID number, age of patient, county/area of residence, mailing address, and phone number). In addition, and most importantly, the report summarizes the nature and amount of contact which the therapist has had with the patient. For example, the number of days since the last DAR of any kind was submitted on the patient is recorded. Also shown is the number of days since the last face-to-face visit. This data together with the most recent diagnosis and the three most recent activities gives the clinical worker a quick assessment of his ongoing interaction with each of his clients. To assist in staff training and supervision, each clinical supervisor is also provided a copy of the therapist's Active Case Load.

The 90-Day Patient Status Review permits the centers' peer review committees to monitor another phase of patient progress. Each active patient who has not been seen in a face-to-face contact for a period of ninety days is listed on this report. Other pertinent data is also given on the report (e.g., date of admissions, data on previous admissions, disposition after last visit, days since last visit, current diagnosis, and number of DAR's submitted on that individual). With this information in hand, the peer review committee can communicate with the clinical worker and recommend that appropriate steps be taken for patients not seen for three months or more. In practice this report has contributed greatly to quality patient care and has prevented many patients from disappearing unnoticed.

Another report, emphasizing quality care, focuses on the elapsed time between the intake interview and the initiation of a treatment program. Again, the purpose of the report is to help ensure quality care by monitoring any delays in delivery of services to new clients. A variety of information is contained in the report drawn from the first three visits of the client to the center. Program mangers who review this data can determine if the center staff is being responsive to patient needs and if the program goals are being realized.

The third, and final, output area discussed in this paper deals with Program Management Reports. As important as all of the preceding patient-oriented reports are, the director or manager assumes the additional responsibility of being accountable to his governing board and funding sources. To accomplish this, the director must have his/her hand on the pulse of the center's day-to-day program. Statistics of all kinds must be readily available to demonstrate needs, document requests, and justify the continuation or expansion of center activities. A good information system will supply this data so that informed planning, management, and decision making will take place on a regular basis.

Of constant concern to program managers is the effective utilization of staff persons. Are staff assigned in accordance with program needs? Are staff actually performing in the areas that the manager has assigned to them? Are staff in one service over-or under-utilized in comparison with staff in other services? These and other similar questions are partially answered by the Professional Activities Report. As seen in Table 4, each professional staff person's activities for a given month are listed under

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five major headings just as they are on the DAR. Frequency of and time spent in each activity is given along with corresponding percentages in each of the five sections. Section subtotals and grand totals complete the statistical summary. If a staff person is assigned to partial hospitalization or crisis center responsibilities, the time spent in these services is also summarized. After reviewing a center staff's work pattern over a period of time (e.g., month, quarter, year), the program manager is in an excellent position to make decisions regarding staff utilization.

During the past two or three years program managers have been faced with another major challenge, the identification of patients who are eligible to receive various benefits (e.g., health insurance, medicare, medicaid, Title XX, social security, etc.). The Third-Party Payor Report was designed to help meet this challenge. This report lists the benefits each patient is eligible to receive and supplies a variety of other relevant information about the patient. For example, the total number of visits the person has made to the center is given along with the fee schedule, total family income, and person responsible for payment. It goes without saying that a report of this nature greatly facilitates the collection of revenues from third-party sources for reimbursement of services rendered.

In summary the output derived from the information system is "elaborate" particularly when it is compared to the amount of input required to establish the system. In our opinion, our major objective has been largely met. A simple, yet elaborate information system has been implemented which satisfies the diverse requirements of numerous mental health services. At the same time, the system has resulted in a relatively high degree of staff satisfaction. The next point for discussion is how a center director or a program manager uses the data derived from this system in day-to-day program planning, management, and decision making.

Program Planning, Management, and Decision Making

In applying the information system on a day-to-day basis, many of the reports referred to in the preceeding section are used regularly. Among those selected for discussion are the Client Application Statistical Report, the Active Case Load Report, and the Professional Activities Report.

Use of Client Application Date with Funding Sources

One area of major concern to all center directors is the availability of financial resources. In the State of South Carolina, all community mental health centers receive financial assistance from three sources: the state department of mental health, local funding agencies, and the federal government through staffing and operations grants. Center directors are regularly accountable to all three of these funding sources. For example, each year the National Institute of Mental Health requires an in-depth analysis of center applicants. This information is acquired and reported by the Research and Evaluation Unit through the statistical summary reports performed on all clients admitted to the center during the previous year. In addition, center directors must meet with state representatives and local council members to explain programs and to provide assurance that clients from a particular catchment area are receiving appropriate services.

One method used to demonstrate this accountability at a local mental health center is dinner meetings sponsored each year by the area mental health associations for county council members, for state representatives, for members of the mental health associations and for other interested parties. The Center Director, at these dinners, presents an overview of the entire center's operation and discusses the goals and objectives for the coming year. Statistical data, presented to our guests through the use of pie and bar graphs, allows county and state officials to acquire a profile of the characteristics of clients requesting services at the mental health center. It also provides them with some general idea of the distribution of clients across the different service components. This, and all other information provided, assists them in making intelligent and responsible decisions. Overall it demonstrates to the public that we as Center Directors are attempting to be accountable for the tax dollar which we receive from various funding sources.

Another use of the client application data deals with third-party sources. In recent years this source of revenue has become extremely important in order for mental health centers to balance their budgets. Through a detailed analysis of our application data we are able to document the percentage of patients eligible for insurance, Medicaid, Medicare and other outside monies. We are then able to project ball park figures for the coming fiscal year and to determine the amount of funds we need to request from local and state agencies. In general, this data permits the Center Directors to justify the various requisitions they make for financial assistance. Furthermore, it allows the Directors to note the number of clients admitted, the type of client admitted, the sources of referral, and the various agencies that the

mental health centers are serving. All of this information aids the Center Directors in convincing their funding sources to allocate as much money as possible to our programs.

A third use of the client application data is concerned with statistics on the annual income for a family being served by our mental health centers. The representative income levels for clients at one center are as follows:

Family Annual Income	Percent of Applicants
$0 - $4,199	40
$4,199 - $7,789	36
$7,890+	24

One can see from this information that 76% of the applicants make less than $7,789 per year. We have also found from our statistical analyses that 73% of our clients are personally responsible for paying the mental health center for the services they received. Obviously because of the low financial status of many clients, services are often rendered without the center being able to acquire reimbursement for these services. It is apparent that supplementary funds from local and state agencies are necessary in these cases so that the center can maintain a balanced budget. This situation is even more pronounced when one realizes that the State Department of Mental Health has a sliding fee schedule for clients who are in the lower income brackets. The sliding fee scale is based on annual income and number of dependents. Therefore, payments from at least 76% of our clients are even further reduced. This clearly demonstrates that the public tax dollar is going to help those persons who are most in need of it. Local county council members and state department representatives are generally satisfied that the money they appropriated is being used to serve the people of our catchment area as intended.

A final example illustrating the use of application data with funding sources concerns the recent unemployment statistics which have been reported not only in our catchment area but also throughout the country. Two years ago the number of unemployed people in the State of South Carolina was as critical as it was across the entire nation. Nationally there were reports indicating that increased unemployment was contributing to increased admissions to mental health services. The data from one of our mental health centers supports this conclusion. In response to a question posed by one of our county council members concerning the effects of local unemployment on admissions, the Center Director referred to data showing a 27.2% increase in admissions of unemployed adults during a one-year period. The unemployment problem in our catchment area was indeed affecting the percentage of people making use of the community mental health center! Utilizing client information in this manner not only impresses public officials, but it also emphasizes to the public that we are accountable, that we are responsive to social indicators, and that we are able to help those who most need it when they most need it.

One question raised by this brief discussion is simply "how effective has the utilization of this data been with regard to impressing funding sources?"

We, at the mental health centers, have noticed in the past few years an increase in questions, an increase in discussion, and an increase in interest by council members and state representatives. We have noticed that the data we present to them has not only educated them with regard to our operation and to the type of clientel we are serving but, in general, has also made them more knowledgeable of our needs and of our resources. The most tangible indicator of success has been a substantial increase in local funding at one center over the past five years. Overall, there has been an average increase of $44,800 per year during this five-year period. From the perspective of a mental health center director, it is very obvious that it pays to use data from client applications when addressing the public, when addressing representatives of the public, and when requesting financial resources from funding agencies.

Use of Client Application Data for Programmatic Purposes

Another use of the client application data has been to stimulate thinking among staff members and service coordinators. This has led to some important discussions regarding program needs and services provided. For example, we have found throughout the past several years that 65% of all applicants reported no previous mental health care. Information such as this demonstrates rather conclusively that the mental health center is a first-line service delivery agency when mental and emotional problems are present. The data also indicate that as the years pass an increasingly greater proportion of people from our catchment areas are coming to the centers with various mental and emotional problems. Our statistics show that these problems are becoming more diverse and varied. Therefore, our treatment programs and service delivery areas must remain flexible in order to meet these new community needs. Statistical data of this nature provides the local center director with evidence which can be taken to supervisors and to executive meetings to convince the staff of the necessity for reconsidering program objectives, for reconsidering the allocation of personnel, and for reconsidering the distribution of monetary resources.

Thus, data from client applications has enabled the Center Directors to evaluate program needs and to recommend specific directions that programs might take. A case demonstrating this point recently occurred at one of our mental health centers. The programmatic change concerned the need to revise our clinical intake approach. The client application data taken together with statistics from daily activity reports verified several plausible hypotheses that members of the Executive Committee had concerning the need for a change in the intake procedures. For example, although there was no waiting list at the center, a high drop-out rate was noted after the first and second sessions. The Research and Evaluation Unit was requested to analyze the number of visits patients made to the center and to make recommendations following the evaluation. The evaluators found that 30% of the patients did not return following the first visit. A consumer satisfaction study revealed that some clients felt that they had been helped with just the one visit. Others felt that the intake worker had not been very responsible to their particular need and, consequently, concluded that they would not get the help they desired at the center. The statistics also indicated that a high

percentage of clients were involved in situational crises which had been allievated during one or two visits plus concurrent changes in the factors precipitating the original crisis. Finally, we found that a small percentage of persons had been referred to other community resources which proved helpful to the client and to the center staff. Based on this data, constructive steps were taken by the staff to improve the intake procedures.

After one year, follow-up analyses of the application and other data still indicated that a relatively high percentage of people were in need of short-term or crisis intervention treatment. That is, 22% of the patients were still dropping out after the first or second visit. This finding suggested once again that programmatic changes needed to be considered. The Center Director requested that additional analyses be performed to determine as exactly as possible what the probable causes were for the drop-out rate and requested recommendations for reducing it. Statistics collected since 1972 revealed that 42% of all applicants reported that their mental health problem had begun within the past year; 30% indicated 6 months or less while 15% said within the past month or so. Many revealed that their problem was of an interpersonal nature and they had difficulty relating to another person. In addition, 65% reported that they had received no previous help from a mental health professional. This data allowed us to reach the conclusion that most of the persons who were withdrawing from treatment after only one or two visits were withdrawing because they had been facing situational crises. Apparently, a good many of these situational crises were being resolved. Clients seemed to be generally satisfied with the service they had received at the center. Those who were not totally satisfied probably were not satisfied because they had little or no previous contact with mental health professionals. Therefore, they were not fully aware of what services were available nor what type of help they really wanted.

Even though the data indicated that the mental health center was striving to meet the needs of the catchment area, the staff realized that there was a tremendous need for more diagnostic and evaluation services coupled with a crisis intervention and short-term treatment approach. An intake team was proposed whose responsibility would be to develop diagnostic, evaluation, and treatment procedures geared to the needs of the clients described above. This team would have direct access to partial hospitalization, inpatient and precare services. It was further decided that coordinators from these related services would meet regularly with the intake team and daily if necessary. The team would also work very carefully with key community referral sources and would coordinate with consultation and education personnel in order to serve other community agencies. In our opinion, the data from the client applications contributed significantly to our overall decision-making process. It introduced the staff to the need for change and to the appropriateness of new treatment approaches. Having supporting data also helped to minimize staff resistance to change. In general, the data allowed us to suggest some alternative approaches to solving an immediate problem and resulted in new procedures which insured that clients would receive the best available treatment in the shortest period of time.

Another area where client application data has been used in program planning concerns the client's source of referral. The application statistics

from one center revealed that certain individuals and professional groups were under- utilizing the services of the mental health center. Specifically, clergy referrals have averaged less than one percent (1%) over the past few years while national statistics have demonstrated that over 40% of persons seeking help go to their pastors first. As a professional group the clergy are potentially a significant source of referrals and, in many cases, are a first-line defense in dealing with personal and emotional problems. Staff members and the Center Director felt that referrals from this group should be much higher. Therefore, an effort was made to work through our Pastoral Services Unit to increase contact with area clergymen thereby making them more aware of the services available at the local center. We also increased our consultation and education services to the clergy in an attempt to answer their questions and to increase their understanding of mental health problems. Since these efforts began, our data has indicated only a slight increase in referrals from this source. The basic question remains unanswered: why does the center not have more clergy referrals? At the present time additional statistical analyses are being performed to suggest an answer to this question. More importantly, other initiatives are being taken in an attempt to more fully develop this source of referral.

In conclusion, these two examples seem to exemplify rather well that client application data can be beneficial in programmatic planning and in the reorganization of various service components. Such data can also caution us that very often potential clients and potential sources of referral in the community may not be aware of the services that a mental health center is capable of providing. To the extent that this is true this obviously indicates that an educational process and a public relations campaign may be necessary if our services are to realize their full potential.

Use of Active Case Load and Professional Activities Reports

The Active Case Load Report is designed primarily for use by the individual therapist. The information contained in this report specifies the patient's name and identification number, the date of the last face-to-face contact with the patient, the person's telephone number, address and total number of cases assigned to that particular therapist. (see Table 3). This information has been extremely useful to staff members because they are able to determine at a moment's glance which cases need to be terminated, which cases have not yet been removed from their case loads, and which need to be transferred to another therapist. Secondly, it informs therapists whenever a new patient has been assigned to them; and thirdly, it maintains a ready reference for dictation and record keeping. Finally, it aids the individual staff member in maintaining an accurate count of cases for which he/she is responsible. An additional benefit, not originally anticipated with the inception of this report, is that our medical records librarians have not been interfered with as much as they were in the past. Therapists are now more aware of who their active patients are and the status of each. In the past the medical records librarians were constantly being interrupted in their work to answer questions regarding assigned responsibility for a patient. This was particularly true if a patient's visit was unscheduled.

As one would expect, key management personnel are also able to use this report regularly for management purposes. For example, the coordinator of Adult Outpatient Services reviews active case loads on a regular basis with his staff to determine workloads and to assist in case distribution during staffing meetings. It also provides an opportunity for the therapist to discuss problems concerning specific patients and his/her overall case load with the supervisor. Furthermore, it helps the Center Director make an accurate assessment of whether or not new staff positions are needed in order to handle the existing workload and to objectively determine which services are being overworked. Data such as this is absolutely essential for decisions regarding the distribution of financial and manpower resources. It also supplies the rationale and factual information needed to support the decision. One must keep in mind, however, that the active case load data alone is not sufficient for deciding to redistribute cases or to shift personnel from one service component to another. The needs of clients and the capabilities, experience, and expertise of the staff members involved are other major factors which a center director must take into consideration. Nevertheless, failure to use quantitative data appropriately and effectively is a failure to be accountable - accountable not only to funding sources but also to one's staff and to one's supervisory personnel.

At this point, some specific examples may help to illustrate the usage of the Active Case Load Report (Table 3) and the Professional Staff Activities Report (Table 4). In general, these examples will demonstrate how a director or supervisor can use data from our information system to monitor programs, to supervise staff, and to make timely and appropriate decisions. The data used in these examples was obtained from the August 1976 reports to one of our mental health centers.

Staff member A is a therapist with an active case load totaling 59 persons. He has no administrative responsibilities. He spends a day a week on Intake and four days a week in Outpatient Services. He reported only 55% of the required work hours. The first question which the center director and supervisor must ask is why this individual reported only 55% of the required time. Was he on vacation part of the month, was he ill, or was this person not being utilized to his full potential? We noted that 78% of the time he reported was in direct services to patients and in dictation and record keeping. While this percentage appears to be appropriate, additional statistics showed that staff member A had only 48 outpatient contacts for the entire month and that he reported 66 missed appointments (an average of 17 broken appointments a week). Obviously, his supervisor needs to discuss this situation with the staff person to determine what the problem might be. Why does the therapist report only 48 patient contacts for the month; why is he reporting 66 missed appointments? Is this a trend which can be seen not only for the month of August but also for the past several months as well? Is so, the supervisor may need to review various procedures and techniques with this therapist in an attempt to help this person with whatever problems he is encountering.

Lastly, we discovered that staff member A had a large percentage of time devoted to administrative duties. As was indicated earlier, however, he had no assigned administrative responsibilities. What may be happening here is simply a breakdown in reporting or simply a misunderstanding of what this person's duties involve. In either instance the supervisor and/or center director need to speak with this individual, specify what his responsibilities are, clarify the areas where he should be devoting most of his energies, and attempt to help him resolve the problem of broken appointments.

Staff member B, with an active case load of 29, is also an outpatient therapist with no administrative responsibilities. He reported 40 hours of annual leave during the month of August. This is approximately one-third of the total number of hours that he should have reported for that particular month. Thus, his reporting was excellent: 99% of available work time was accounted for on his Daily Activity Reports. He worked 108 hours distributed as follows:

Clinical (Individual, Group and Intake)	29 hours
Client did not keep appointment	6 hours
Dictation and records	26 hours
Administrative duties	25 hours
Treatment conferences	6 hours
Program planning, staffing, training, supervision	13 hours
Travel	4 hours
	108 hours

In this instance the supervisor should note that about 50% of his time was devoted to duties of an administrative nature. Further, there is an almost one-to-one (1:1) ratio when dictation and record keeping is compared to actual direct services provided to clients. In our centers, no therapist should have a 1:1 ratio between paperwork and direct services! The supervisor of Outpatient Services must discuss these matters with staff member B, determine what is actually happening on a daily basis, and make appropriate adjustments. The supervisor might also compare staff member A's and B's case loads to determine if a redistribution is in order.

Staff member C, with a case load of 62, is responsible for coordinating satellite activities three days a week. She reported 79% of the required 150 work hours for the month of August. Many of her cases are seen in groups; therefore, she spends approximately 15 to 20 hours a week in direct services which includes the required dictation and record keeping. About 12 hours a week are spent in administration with the remaining 5 hours divided among planning conferences, supervision, and travel. Her workload balance appears to be quite good. Therefore, it would be unwise on the part of the Center Director to shift any more responsibility to her. However, even in this instance, we find that her reporting rate can be improved. Her work performance seems to be very adequate for the job description she is filling, but her 79% reporting rate needs to be raised considerably. This responsibility should be mentioned by the Center Director to the coordinator.

Staff member D is a major service coordinator. Her active case load is 62 individuals. She reported only 27% of the required hours. Her reporting obviously is very poor for the month and has been for several months. Although the data has been available to all levels of management (Director, Associate Director, and Adult Service Director), appropriate corrective action was not taken until September 1 of this year. The obvious question must be asked; why had no manager discussed this individual's poor reporting rate with her? On July 1 the Center Director became her immediate supervisor. The two meet weekly for supervision. The focus of this supervision is on planning and organization of work, delegation of responsibility to other staff members, and efficient usage of time. Yet, it took two months of supervision by the Center Director before her activity reporting became acceptable. This was simply due to the fact that the issue had not been dealt with directly. As this example clearly points out, adequate utilization of available and relevant data is essential for program management. It is a poor reflection on our managers that for many months supervision with this person produced no positive results with regard to her activity reporting rate simply because no one took the time to deal with the issue directly. The data was available but managers refused to utilize it.

If one is going to optimally use an information system, the system must not only produce sound and objective data but the data must also be used when needed by the appropriate supervisory personnel. The data contained in the Active Case Load and Professional Staff Activities Reports assist managers in making timely and responsible decisions with regard to overall unit operations. For example, a service director recently requested additional clerical help. His immediate supervisor brought the matter to the attention of the Center Director who promptly raised the question about the nature of the work which needed to be completed. It was necessary in this instance to assess whether or not the Word Processing Center and other clerical support personnel were being properly used. The obtained information demonstrated that they were not being effectively used. Furthermore, some confusion was expressed even by the immediate supervisor since this same staff person had stated only four months earlier that no additional help was needed. A review of the Active Case Load and Staff Activities Reports yielded some significant facts which aided us in explaining these rather inconsistent findings.

The staff member in question had a 70% increase in patient load over the previous seven month period. In other words, he was now seeing three times as many patients as he had been at the beginning of 1976. During this period he had become more active in community consultation and education activities as well as working on a couple of proposals to be submitted to funding agencies. In addition, some of his supervisory and administrative responsibilities had been increased. During the same period of time another key supervisor in the same service area was carrying a case load of seven patients in the partial hospitalization program. The staff report showed that the first staff member, with the heaviest case load, reported 179 hours while the second staff member, with a very low case load, reported 140 hours. This phenomenon raises a basic question in and of itself. Why does one person, whose case load increases 70% during a seven month period, complete his work in 179 hours while another person, who has only a few clients, takes almost an entire month to complete his work? The first staff person has assumed a

high percentage of the case loads of staff persons who have terminated their employment in recent months. This helps explain why the 70% increase in patient load occurred. Although there were other staff members with small enough case loads to assume some of this load, the supervisor thought they were too inexperienced and not yet ready to undertake the additional responsibility. The staff person with the heaviest case load readily admits to over-extending himself. In reality, of course, the work load distribution was extremely disproportionate in his service area. Had he used the data available to him, it would have become rather obvious that he was over-extending himself and that other individuals were actually under-extending themselves. Even though the latter persons were inexperienced, they certainly could have assumed some of the additional work. When faced with such data, a manager must take steps to see that work loads are balanced. With respect to the original request for additional clerical support, the Center Director decided that the request should be deferred until the supervisor was able to reduce his case load and increase other case loads to more appropriate levels. If, at that time, the supervisor still felt that additional help was needed, proper steps would be instituted.

The Professional Staff Activities Report referred to in the previous example is a complete summary of how staff members use their time. As has already been noted, it is an important summary report for both the individual staff member and for all supervisory personnel. It is also very helpful in making programmatic decisions. For example, staff members in the Child and Adolescent Partial Hospitalization Program were not receiving sufficient referrals. Overall, case loads were quite low. In studying the problem, one contributing factor appeared to be the rigid admitting requirements instituted because the staff were under the impression that they were to treat only the more severely disturbed patients. A review of time utilization revealed a higher percentage of staff time being reported in administrative duties than in direct treatment activities. Other factors were also involved and all indicated that our resources were not being focused primarily in the clinical treatment area. Some very competent and costly human resources were being wasted. After reviewing the professional activities data and other information, it was decided that the program needed to be refocused. The Board of Directors was informed of the situation and approved the decision to change the program in order to be more responsive to community and staff needs and to use resources more responsibly. The task of convincing the Board of Directors to permit the change was relatively simple because we had supporting data from the Professional Activities Report.

In concluding this section, a final and very simple example of data usage may be of interest. For some time a program director was besieged by a few staff members claiming co-workers were not doing their share of intake interviews. On a given intake day, it seemed possible that the contention may have been true; but, over the long run, the claim did not seem to have any substantiation. Previously, the director did not have appropriate information readily available. With the advent of the computerized information system, it is now available in a simple report. Summarizing over a given period of time, the number of intakes per staff member was evenly divided. The program director reported this finding to the staff and asked very simply "What is the

real issue behind your complaints?" Such a simple use of data has cut down on unnecessary hassles between staff members and supervisory personnel. In fact, in recent months one seldom hears this kind of issue being raised anymore.

Our information system is obviously only as good as the accuracy and the completeness of the staff reporting the data. Admittedly, it is difficult to ensure accurate and timely reporting; however, this is one of the responsibilities of all supervisors and the Center Directors. Moreover, using the data consistently and regularly, informing the staff about how one plans to use it, and requiring supervisors to make use of it on a monthly basis ensures that staff members will report in a consistent manner. For example, the Adult Outpatient Coordinator is beginning to require his staff to bring copies of the Professional Activities Report to staff meetings to use as a resource in staff planning and time utilization. This points up very clearly that the organizing and dispersing of data in a reasonable format is both sensible and absolutely essential.

The data must also be applied. That is, it must be used by all members of the center or valuable resources are simply going to be wasted. The major weakness in an evaluation program is management's failure to train key supervisors to use the available data in the most effective manner. This is true in our programs as well. With the possible exception of a limited number of supervisors, reports are not being used as completely as they could be. Therefore, one must develop a plan for broader utilization and application. However, the very fact that we complete the feedback loop to staff persons encourages day-to-day reporting and frequent usage of reports. The result is very valuable in terms of program planning and certainly brings about more efficiency throughout both mental health centers. Since we are in the psychological treatment profession, a significant secondary outcome of this system has been its impact on staff morale. That is, it serves not only as an administrative tool to encourage efficiency and improve services, but it also serves as a tremendous reinforcement for staff self-worth by providing them with data about their accomplishments and by helping to eliminate unnecessary and disruptive hassles.

Conclusion

This information system described in this paper is working and has been working for two mental health centers. As the directors and evaluators look to the future, the number of program applications using the basic system are many and quite varied. For example, the system can easily be programmed for billing purposes, medication evaluations, financial management reports, and internal appointment systems. In addition, new methods of monitoring drug usage and of assessing treatment effectiveness will continue to receive careful attention in the future. It is noteworthy to emphasize that these changes can be accomplished without unduly complicating the system described earlier in this paper. It is possible to incorporate additional information without losing the simplicity of the design and without making the system so complicated that the mental health professionals are not able to understand and utilize it. In general, we feel that the model presented in this paper

adheres very strictly to the major objective of the system - simple in design, simple in usage, simple in terms of reporting requirements, but very practival in applying the data obtained to planning, decision making, and program management.

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A Mental Health Information System Overview

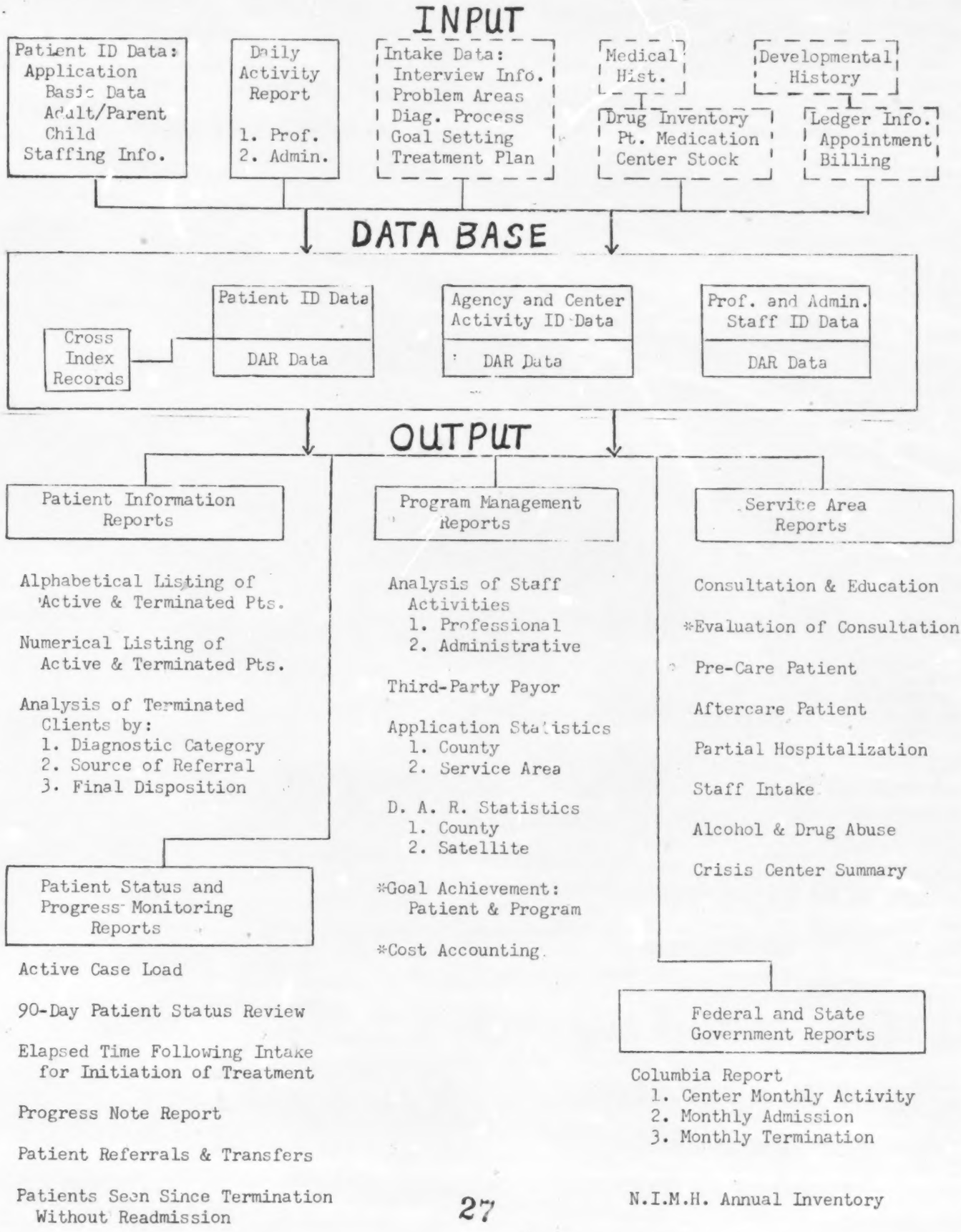

Table 2

Analysis of Terminated Clients by Final Disposition

Example of Variables	Type of Final Disposition				
	Pt. Terminated Further Care Not Necessary	Pt. Withdrew Notified Center	Pt. Withdrew Did Not Notify Center	Pt. Referred to State Hospital	Etc.
No. of Children					
No. of Adults					
Length of Treatment					
No. of Face-to-Face Visits					
Elapsed Time Between Intake & Treatment					
Individual Therapy					
Group Therapy					
Goal #1: N X s^2 $\Sigma(X^2)$ (ΣX^2)					
Therapy Effectiveness (from DAR)					
No. of Transfers to Another Therapist					
Terminating Diagnosis					
Presenting Problems					
Previous Mental Health Care					
Fee Schedule					
Staff Person Responsible					
Demographic Variables					

Table 3

Professional Report: Active Case Load

Patient Name	ID Number	Child/ Adult	Last[a] DAR	Last[b] Visit	Last Diag.	Last Three Activities	County	Phone	Complete Address
(Alphabetical Listing of Patients)									

Total Number of Active Cases _____

T prior to patients name indicates that person was transferred to case load during current month.

* prior to patients name indicates that no staff person is currently assigned; assignment made from last DAR submitted.

[a] Last DAR refers to the number of days since last DAR of any kind was submitted on patient.

[b] Last Visit refers to the number of days since a face-to-face visit was reported.

Table 4

Professional Staff Activities Report

Staff Activities	Freq.	%	Time	%
Direct Services				
Individual Therapy				
Group Therapy				
Psychological Evaluation				
Etc.				
Subtotal				
Admission & Emergency				
Intake Interview				
Emergency Treatment				
Etc.				
Subtotal				
Treatment Support				
Dictation and Records				
Treatment Conferences				
Etc.				
Subtotal				
Consultation & Education				
Program Oriented Consultation				
Training & Continuing Education				
Etc.				
Subtotal				
Administration				
Administrative Duties				
Program Planning Conferences				
Etc.				
Subtotal				
Partial Hospitalization Activities	(if applicable)			
Crisis Center Activities				
GRAND TOTAL				